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DISTURBANCES OF APPERCEPTION IN INSANITY.¹

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The relation of normal psychology to pathological mental states has up to the present time been almost disregarded, chiefly by reason, on the one hand, of the uncertainty of psychological theories and, on the other, of the insufficiency of classified data. Those having immediate charge of the insane, and most psychiatrists as well, have contented themselves with formulating working classifications of insanity, which, of course, have a value independent of scientific considerations. But within the last few years, chiefly through the work of Kraepelin and a few others, both parties have had an awakening in this direction. The psychologist is beginning to see that the facts of nervous pathology and defective mental states form one of the most illuminating side-lights of his science, while the physician dealing directly with insanity is learning that the way to arrive at a knowledge of his patient's condition and the best method of treatment can be ascertained only on the basis of a well-grounded psychology. Some effort has already been made to place the work of the asylum on a surer scientific basis, as may be seen from the last report of the Worcester Asylum. The present paper, based principally upon a study of delusional insanity, contains merely tentative positions, intended to show in a general way how the facts of normal psychology and insanity may be brought into closer relationship.

The word apperception has a history of various uses and applications. Before the rise of modern psychology and with philosophers such as Leibniz and Kant, the term has a peculiar metaphysical significance, which use we must exclude in the interest of science however well it satisfies our speculative inclinations. With Herbart, again, the word means the assimilation of a new element to a given mass, in which the new element loses entirely its distinctive identity. At the present time the word as used by psychologists may have especial reference to one of three facts: (1) the fact of attention or clear consciousness, (2) the peculiar organization of the mental contents which

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makes clear consciousness possible, and (3) the conative processes which make consciousness a changing and active instead of a fixed organization. Wundt found in the first of these the point of departure for his doctrine of apperception. His effort was to explain the fact that at any given moment consciousness exhibits a series of gradations from the point of greatest clearness to entire obscurity, or, to use his own metaphor, the fact that there is a *Blickfeld* or field of consciousness, certain portions of which stand at the *Blickpunkt* or point of clearest vision. But in view of the sensationalistic theory that the clearness of consciousness is determined directly by objective conditions, Wundt finds it necessary, in order to justify his theory, to show that the clearness of apperception has a more comprehensive meaning than the mere intensity of sensation. This is proved in general by two facts, (1) the ability of the *Blickpunkt* to move over the entire field of consciousness under the same set of external conditions, and (2) the inverse ratio existing between the number of ideas apperceived and the degree of clearness of any one of them. In this way Wundt justifies the claim of apperception to be a mental process possessing relative independence.

The fact that at any given moment one idea rather than another appears in clear consciousness points to some kind of organization of the mental contents and to some kind of interaction. The study of apperception in this direction has been most completely carried out by Dr. Stout. With him the term means the organization and activity of "systems" or unified groups of sensations ("Analytic Psychology," Bk. II., Ch. V-VIII). Under this view perception is not a process independent of apperception, functioning only in the acquisition of raw material, but is itself a process of the apperceptive activity. A sensation does not, so to speak, force itself into consciousness and lie loose and isolated until it finds its place, but its very reception is conditioned by the reaction upon it of consciousness as a whole. The activity of consciousness is then essentially synthetic. A group of sensations are fused together in such a way as to form a system which, when its formation is relatively complete, selects one of its elements to represent the whole. For example, when I see any object, as a book, there is present a whole complex of tactile and kinæsthetic sensations of which I am unconscious in the act of perception. Being a visualizer, if I close my eyes and feel raised lettering, I can get no idea whatever of what the letters mean. This shows that in the synthetic grouping of sensations in my consciousness visual elements emerge and, so to speak, assume the leadership of the groups. These primary groups again combine into more comprehensive systems, each in turn represented by

one of its own elements. The mental contents then seem to have a compacted hierarchical organization comparable to that of an army, in which each of the subordinate units, represented in its head, is subsumed into the one above it. This organization is not to be thought of as static, but rather as interactive. In fact, this view is the only one that can explain the third set of phenomena included under the term apperception—the 'forces' of mind. With Wundt activity issues in little more than a very indefinite *Thätigkeitsgefühl*, while, according to this conception, the conative processes form the very conditions which make the 'field of consciousness' possible.

Let us now substitute words of psychological usage for the somewhat abstract terminology hitherto employed. *Sensation, idea* and more or less complex *associations of ideas* stand for successive stages in the hierarchy of conscious systems. There is a dual activity in consciousness to which we shall refer again, namely, the functioning of all the subordinate systems in the formation of a judgment, and the activity of judgment or the organization of consciousness as a whole in the reception of new sensation elements. With this very general statement of the theory of apperception, we will now proceed to discuss some of its most apparent disturbances manifested among the insane. It is to be remembered that in dealing with apperception we are passing beyond the field where psychology has most successfully applied exact experimental tests, so that our theories lack in large measure that experimental certainty which science so much desires. Again, the difficulties in the way of an experimental investigation of mental disturbances are apparent without mention. Yet, practically, all studies of insanity on the psychical side must deal with disturbances of apperception. Says Kraepelin: "Was wir heute untersuchen können, sind vielmehr im wesentlichen nur die Auffassung von Sinnesreizen, das Gedächtniss, die Vorstellungsverbindungen, die Auslösung von Willensantrieben, und die Ausführung von Muskelbewegungen" (*Psych. Arbeiten*, Bd. I, p. 30). On the physiological side microscopy has yet to win its greatest victory in the study of living tissue. Still its triumphs in the past make us optimistic in regard to its future attainments. As yet our knowledge is limited to certain forms of degeneration manifested in cortical areas and association fibers. As to the inner changes of the cell and the functioning of the fibers we know almost nothing.

It is impossible to make any general statement as to how insanity begins. It may be seen from Kraepelin's studies in *künstliche Geistesstörungen* that so far as concerns therapeutically induced mental disturbances, no definite method of attack can be postulated. The same is apparent to any one familiar with the various forms of insanity. Even in dementia, by which

is meant a general nervous and mental weakening, an indefinite number of mental elements may be picked out as seats of disturbance, while others are in only a small degree impaired. Except in idiots and the very worst dementes a certain residuum of normal activity seems to go on automatically. This would indicate that while the connections between systems of different strata may be disturbed or destroyed, there is still an associative connection between co-ordinate systems: moreover, that this associative connection is more pronounced the lower we go in the hierarchy of the conscious contents. The matter is somewhat more accessible in delusional insanity. Here we can trace with some degree of definiteness the manner in which the apperceptive function is disturbed.

We have seen that the highest activity of consciousness regarded as a unitary system is represented in the formation of the judgment. This central representative system is what is commonly spoken of as the "point of view." This system, whether we are conscious of it or not, is implicitly present in every judgment we form, and, so to speak, stands for the integrity of the mental life. Delusion may be defined as persistent error of judgment, by which we mean a disturbance of the relationship existing between the "point of view" and the ideas which it dominates. This disturbance may be of more or less permanence, and may issue in only a slight modification or a complete destruction of the controlling system of consciousness. Let us consider a quotation from Mercier. "A man might assure us repeatedly and day after day that he was Emperor of China, but if he conducted his business successfully, and if his conduct toward his servants, his family, his friends and all his surroundings, was normal and proper, we should never consider him insane. But if he were to go to town with a yellow silk umbrella we should begin to look upon him with suspicion; and if he were to send yellow buttons to distinguished strangers as a mark of distinction and favor we should no longer doubt that he suffered from insane delusion" (*Sanity and Insanity*, p. 103). The author uses this illustration to prove that the test of insanity lies only in conduct. The question might be raised as to whether a man's conversation cannot be considered a part of his conduct. I can see no reason why the man should not be considered sincere in his assurance, and his case one of mental aberration, between which and insanity proper only an arbitrary line can be drawn. As a matter of fact this is just the way in which many cases of delusional insanity develop. Systematized delusions may grow up very rapidly or very slowly, but they never spring into being simultaneously. If a man confidently assures us that he is Emperor of China, it is only a matter of time until he will perform acts such as carrying a yellow

umbrella and sending yellow buttons. Through some cause which lies within the province of the pathologist or the sociologist, a certain unified system of ideas is unduly emphasized in consciousness. At first its only effect is an abnormal absorption of attention as a more or less isolated unit, but gradually it modifies or supersedes the "point of view" until under it, as the controlling element, the subordinate units of consciousness are systematically arranged even down to the smallest details. I have in mind the case of a woman under my observation who believed that she was the mother of Jesus, and under this idea had a beautifully elaborated system of delusions pertaining to her past life, her future intentions, her presence at the asylum and her daily habits of life. In many cases of systematized delusions, however, the original point of view is not destroyed, but only modified. Thus the business man thinks he is making great commercial ventures, the scientist significant discoveries, and so on. All degrees of this modification may be found from the "queer," "eccentric," "crack-brained," "off," "cranky" person we meet every day, to the most deluded inmate of the asylum.

Another form of delusional insanity claiming our attention is that in which two ideas instead of one come to occupy the prominent place in consciousness. Each of these ideas has its own system of subordinate elements, and the patient passes from one to the other in response to certain accidents, mostly of a coenæsthetic nature. This is a possible method of explaining the changes in identity frequently manifested among insane patients. The disturbance of the apperceptive function may proceed until the power of forming judgments is entirely lost, in which case we find an indefinite number of delusions apparently without connection, based upon as many co-ordinate but more or less isolated systems. When the disturbance reaches the connection between the secondary systems and the ideas of which it is composed the patient is completely at the mercy of suggestion or merely associative connection. Even association is gradually destroyed, when results a state of more or less complete confusion which from the nature of the case is inaccessible for study.

Perhaps the most efficient agent in determining the manner in which delusions are formed is the *feeling-tone* of pleasantness and unpleasantness. These are regarded by most psychologists of the present time as elementary conscious states co-ordinate but not identical with sensations. Sensation is the conscious state attending the reaction of a definite sense organ to stimulation; feeling-tone, on the other hand, attends the reaction of the whole organism, and accompanies the general physiological process of anabolism or catabolism. The surest method of investi-

gating feeling-tones is by studying their bodily effect or accompaniments. These are for pleasantness, increased bodily volume, deepened breathing, heightened pulse and increased muscular power; for unpleasantness the reverse phenomena. We may deduce these general facts in regard to states of feeling. (1) They affect to a greater or less degree the whole of consciousness. (2) They keep the elements to which they are most strongly attached persistently before the attention. (3) They definitely affect all the organic processes in the way of acceleration or retardation. These facts seem to be of the greatest importance in the explanation of certain forms of insanity. Let us suppose that because of some organic derangement a strong feeling of unpleasantness arises in consciousness. It soon fixes itself upon some idea that lends itself readily to the adjustment, for example, the idea of persecution, already containing within itself a memory image of unpleasantness. Thus emphasized, the idea is kept persistently before the attention until it gradually assumes first place in consciousness, when the systematizing process begins. The activity of consciousness being slow and under the constant influence of the feeling-tone, elaboration of delusions is often carried to a wonderful degree of completeness. The history of mania is somewhat different from that of melancholia. Here the activity is so increased that time is not afforded for the formation of systematized delusion, but the attention passes rapidly from one idea to another, each one being for the time the controlling factor in consciousness.

Mention was made in the early part of this paper of the dual activity of consciousness; the associated action of the lower systems in the formation of judgments, and, on the other hand, the action of all the higher systems in the reception of new sense elements. It cannot be supposed, then, that a disturbance of the higher functions can be without serious consequences among the lower activities. These disturbances are variously spoken of as hallucinations, illusions, sensory fallacies, subjective perceptions, and so on. In order to understand the meaning of such disturbances it is well to find at the outset where they are most prevalent. That they exist to a limited extent in normal life no one can doubt. In insanity they exist in varying degree in mania, melancholia, dementia and delusional insanity. Concerning dementia Krafft-Ebing says: "As the mental images become less complex and vivid as memory fades and the patient gradually sinks into profound psychical weakness, hallucinations and illusions become ever rarer; the former, indeed, are almost unknown in advanced general paralysis, and the latter occur but seldom" (Die Sinnesdelirien, p. 48). To this let us add a quotation from Parish: "Delusional Insanity and Paranoia abound in hallucinations, so much so that some forms classed

under this head are designated 'hallucinated insanity' and 'paranoia hallucinatoria.' The sense-deceptions of delusional insanity are vivid in their externalization and resemble in their content the fixed ideas which they embody" (*Hallucinations and Illusions*, p. 23). The prevalence of fallacious perceptions in delusional insanity, and their gradual disappearance in progressive dementia, will immediately suggest some close connection with the systems whose derangement we have been considering. We will even venture so far as to say that they depend entirely upon the insufficient or abnormal activity of judgment. Kraepelin (*Psychiatrie*, p. 79) tells us that the influence of hallucinations upon the mind is not chiefly due to their strength as elements of perception, but to the close relationship in which they stand to the contents of the patient's habitual thought. Parish seems to take the opposite view that, instead of delusions causing fallacious perceptions, the latter cause the former. Speaking of the dangers attending auditory hallucinations he says (*op. cit.*, p. 30): "they lead him (the patient) to seek for explanations, and thus bring delusive ideas in their train." (*Cf. Kandinsky, "Zur Lehre von den Hallucinationen," Arch. für Psych.*, XI.) It seems to me that here consideration is given rather to the way in which the patient manifests his disorders than to any causal connection. We might better say that the patient is unconsciously searching for evidence to support his delusion, and when it presents itself in the form of fallacious perception he naturally explains it by the preconceived delusion. Again, this view is supported by the whole mass of psychological facts pertaining to perception. We must remember that ideas or combinations of sensations are not given to the mind as ready-made copies of external things, but that they are the product of a subjective fusion process. When any sensory element presents itself, all of consciousness displays an activity in its reception and the particular idea to which it has been before apperceived is projected to assimilate it, and the whole idea in combination with this element is externalized. Consequently, in the sense of externalized subjective elements, all of our perceptions are illusions. Evidently, then, this side of the matter can have no part in the definition; so that the only question left for consideration is the fallacious nature of the perception. This we must again say is a matter dependent upon judgment. The idea that the sun moves round the earth is considered an illusion at the present day, but it was not in ancient times. We simply occupy a different "point of view," and judgment corrects the perception. The same fact appears in connection with the common illusion of flying houses and trees when viewed from a moving train. A memory image of motion is attached to the impressions actually coming in. The

process of judgment serves to break up this complex and to relegate this image to the system to which it really belongs. When this corrective process is fully carried out the landscape no longer seems to move. Herein lies the difference between the trained scientific mind and the mind of common sense—the former is able to break up its ideas, and, on the basis of the data available, rearrange the elements in a consistent system. Science is constantly demonstrating to us the illusory character of our everyday perception. What is true of the ordinary man is in much greater degree true of the insane. If the ordinary man is constantly projecting the elements of his thought in perception, it is easy to see how the insane patient, with his abnormal "point of view," can see his delusion in every sensory process. If, again, the ordinary man is not able to draw any line between the subjective and objective factors in perception, we can hardly expect the insane person, with his weakened judgment, to recognize the difference between subjectivity and objectivity. If the foregoing is true, it is hardly necessary for us to indicate the fact that the definition, first presented by Esquirol and commonly accepted since, of illusion as the false interpretation of external objects, and of hallucinations as sensory images without external stimulation, is entirely inadequate. The distinction is based upon a physiological process that is by no means unambiguous, while here we are dealing with a distinctly psychological phenomenon. As Gurney says (*Hallucinations*, p. 155): "Every psychological phenomenon that takes the character of a sense-impression is a sense-impression. When the hallucinated person says, I hear so-and-so, or I see so-and-so, the words are literally true; for to him a hallucination is not merely like, or related to, a sense-impression, it is identical with it." The same view is supported, but in my opinion with insufficient treatment, by Kraepelin (*Psychiatrie*, p. 103): "Die Schwierigkeit, Einbildungsvorstellungen von fast sinnlicher Lebhaftigkeit scharf von der wirklichen Wahrnehmung zu trennen, ist die Ursache, warum bei Geisteskranken gerade die Vermischung von Sinnesindrücken mit selbst gelieferten, dem eigenen Vorstellungsverlaufe entstammenden Bestandtheilen eine so verhängnissvolle Quelle der Verfälschung ihrer Erfahrung wird."

In regard to motor disturbances manifested among the insane very little can be said at the present time. It is certain, however, that the old classification of them as diseases of the will is no longer tenable in view of the modern psychological facts. Motor phenomena are now regarded as necessary elements in all mental processes, and are not to be ascribed to a peculiar mental "faculty." It would seem, therefore, that the only genuinely motor disturbances are to be found in cases such as

epileptic convulsions, verbigeration, etc., while what are known as imperative ideas, obsessions, etc., probably have normal motor processes, with the real seat of disturbance in the apperceptive connection of ideas.

In conclusion, it must be admitted that the almost infinite variations in the forms of insanity make the present treatment of the subject seem very general and perhaps artificial. Moreover, those dealing in a practical way with the insane need most a specific, definitely determinable classification. It is to be hoped that the rapidly growing mass of psychological facts will soon enable us to speak with more precision. Our endeavor here has been to call attention to some of the work already done along this line and to suggest directions for further research.